

G. austromontana may have evolved from a common ancestor along with *G. clausa*, *G. decora*, and other related species, or it may have arisen following the hybridization of *G. clausa* and *G. decora*, which are sympatric only in the limited area where this species is found. It appears to be a relatively stable component of the southeastern flora, occurring in some remarkably uniform populations.

ROYAL BOTANICAL GARDENS, HAMILTON, CANADA
DEPARTMENT OF BOTANY, UNIVERSITY OF TENNESSEE,
KNOXVILLE, TENNESSEE

SOLIDAGO RUPESTRIS AND *S. CANADENSIS*— *Solidago rupestris* of Rafinesque (1820) has, at best, been considered as a "weak" species, closely related to *S. canadensis*, by many students of the genus. Others have reduced it to the status of a variety of *S. canadensis* or simply rejected it. There is no doubt that this usually glabrous plant looks much like *S. canadensis*. Moreover, the two have the same chromosome number, i.e., a somatic number of 18 (Beaudry, 1963). Nevertheless, *S. rupestris* can be separated easily from *S. canadensis* by means of its basal and lower cauline leaves, which are broadest above the middle in the first but broadest at the middle in the second (these leaves are absent in most specimens at the time of flowering), and also by means of the involucre size and the phyllary shape. These characters have not been mentioned in Rafinesque's original description, who, strangely enough, related his species not to *S. canadensis* but to "*S. odora*." The shape of the lower leaves has been taken into account by Small (1903) but not considered by all later authors, and the characters of the head have never been pointed out, as far as I know.

The head of *Solidago rupestris* is larger than that of *S. canadensis* var. *canadensis*. Measurements made on the length of the involucre of 9 specimens of the first, range from 2.8 to 4.3 mm., with a general average of 3.6 mm., while those obtained on 8 specimens of the second range

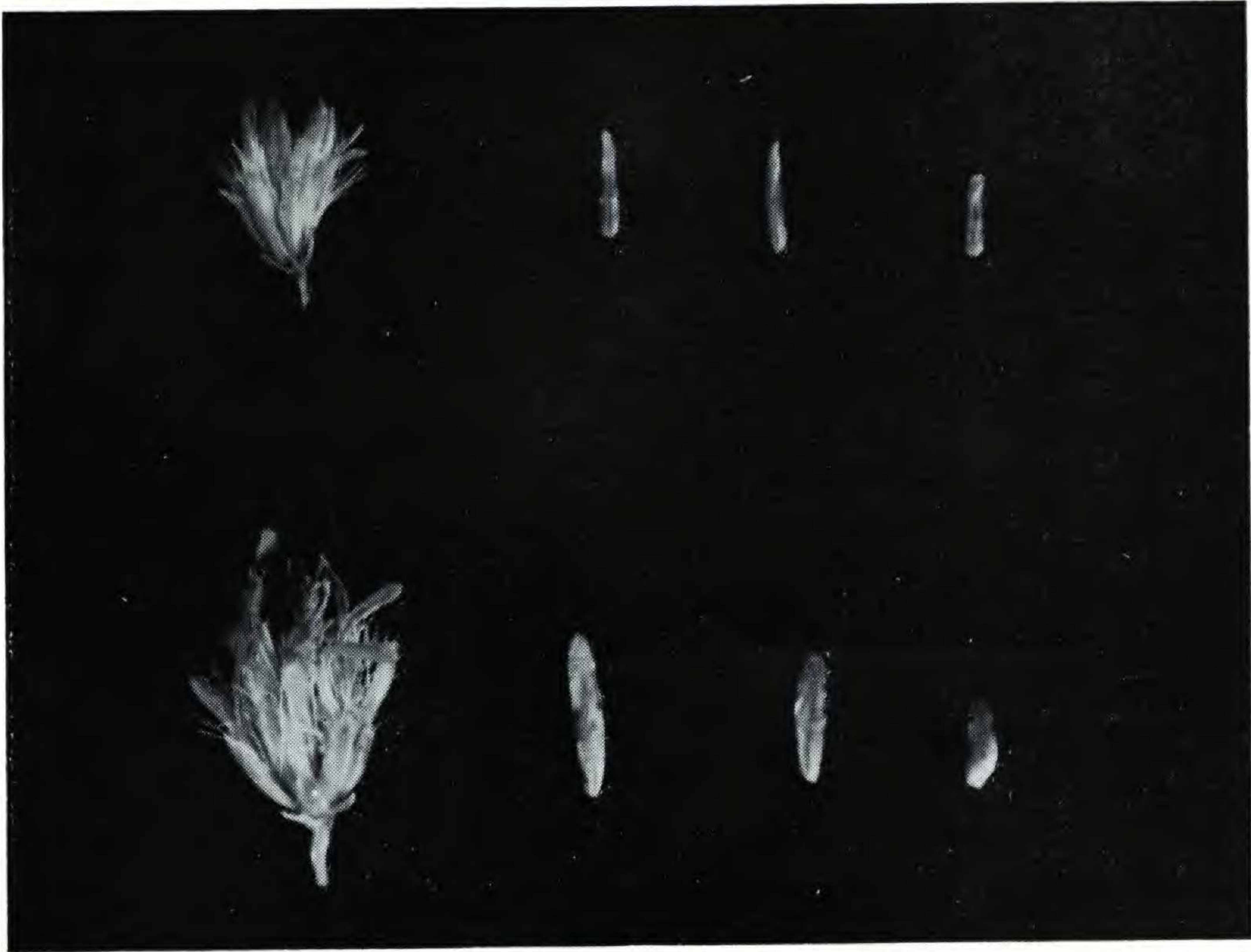


Fig. 1. *Solidago canadensis* var. *canadensis* (upper row) and *S. rupestris* (lower row): entire head, followed by internal, median, and external phyllaries, \times ca. 5. *Fig. 1 is plate 1307.*

from 2.5 to 3.1 mm., with a general average of 2.9 mm. The shape of the phyllaries, however, is a better diagnostic character than the size of the head: the phyllaries of *S. rupestris* are oblong, blunt or even obtuse, while those of *S. canadensis* are linear and attenuate (Fig. 1).

J. R. BEAUDRY, INSTITUT BOTANIQUE, UNIVERSITÉ DE MONTRÉAL, QUE., CANADA.

REFERENCES CITED

- BEAUDRY, J. R. 1963. Studies on *Solidago* L. VI. Additional chromosome numbers of taxa of the genus *Solidago*. *Can. Jour. Gen. Cyt.* 5: 150-174.
- RAFINESQUE, C. S. 1820. *Annals of Nature* 1:14.
- SMALL, J. K. 1903. *Flora of southeastern United States*. New York.